AMENDMENTS TO THE CLAIMS

Please cancel claims 1-30.

Please add new claims 31-69 as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-30 (canceled)

Claim 31 (new): A surface reactor for improving liquid or gaseous fuel, comprising:

a body having a length and an average diameter, the body being at least partially made of an alloy containing at least 80% tin, the alloy constituting an active material that reacts with the fuel, wherein the body is formed as one of a band, a chip, a spiral and a wire in a shape of a filament, and wherein a ratio of the length to the average diameter of the body is a value between 10 and 10^8.

Claim 32 (new): The surface reactor as recited in claim 31, wherein the body is exclusively composed of the alloy.

Claim 33 (new): The surface reactor as recited in claim 31, wherein the body includes a support material coated with the alloy.

Claim 34 (new): The surface reactor as recited in claim 33, wherein at least one of the support material and the body is formed as a chip having an average thickness of 0.1-0.9 mm and an average width of 1 to 15 mm.

Claim 35 (new): The surface reactor as recited in claim 33, wherein at least one of the support material and the body is formed into the shape of one of a band, a spiral and a wire having an average diameter of 1-30 mm.

Claim 36 (new): The surface reactor as recited in claim 35, wherein at least one of the support material and the body is mechanically formed from one of a cold forming and a hot forming process.

Claim 37 (new): The surface reactor as recited in claim 31, wherein the body is one of braided, woven, twisted and interwoven so as to provide an increased surface area.

Claim 38 (new): The surface reactor as recited in claim 31, wherein the body is formed as a band and is at least partially rolled, punched and/or stamped.

Claim 39 (new): The surface reactor as recited in claim 33, wherein the support material includes at least one of a noble metal, an organic material and an inorganic material.

Claim 40 (new): The surface reactor as recited in claim 33, wherein the support material is electrically conductive.

Claim 41 (new): The surface reactor as recited in claim 33, wherein the alloy is applied to the support material by at least one of electrolysis, vapor-deposition, cold spraying, spraying, or dipping.

Claim 42 (new): The surface reactor as recited in claim 37, further comprising a reaction chamber and wherein the body is formed according to a shape of the reaction chamber.

Claim 43 (new): The surface reactor as recited in claim 42, wherein the shape of the reaction chamber is one of a cylindrical, a spherical and a cuboidal shape.

Claim 44 (new): The surface reactor as recited in claim 31, wherein the body is inserted in a fuel-carrying component.

Claim 45 (new): The surface reactor as recited in claim 44, wherein the fuel carrying component is one of a tank, a hose, and a filter housing.

Claim 46 (new): The surface reactor as recited in claim 33, further comprising a reaction chamber, an inlet pipe and an outlet pipe (4) and a filter disposed on an outlet side of the reaction chamber, upstream of the outlet pipe and downstream of the body.

Claim 47 (new): The surface reactor as recited in claim 46, further comprising a spacer ring disposed in the reaction chamber downstream of the inlet pipe.

Claim 48 (new): The surface reactor as recited in claim 31, wherein the body is covered with a protective coating.

Claim 49 (new): The surface reactor as recited in claim 48, wherein the protective coating prevents reaction with at least one of oxygen and oxygen compounds.

Claim 50 (new): The surface reactor as recited in claim 48, wherein the protective coating includes wax.

Claim 51 (new): The surface reactor as recited in claim 31, wherein the alloy also contains at least one of the metals copper, silver, gold, and platinum at a maximum concentration of 10 %.

Claim 52 (new): The surface reactor as recited in claim 31, wherein the alloy includes 90-98 % tin, 2-5 % copper, 0.05-2 % silver, and 0.01-5 % gold.

Claim 53 (new): The surface reactor as recited in claim 33, wherein a surface of the alloy is activated by a reducing agent, washed with an alcohol, and sealed.

Claim 54 (new): The surface reactor as recited in claim 53, wherein the reducing agent is a sodium hydroxide solution.

Claim 55 (new): A method for manufacturing a surface reactor for improving liquid or gaseous fuel, the method comprising:

providing a support material;

coating the support material with an alloy so as to form a body, the alloy containing at least 80% tin and constituting an active material that reacts with the fuel, wherein the body is formed as one of a band, a chip, a spiral and a wire in a shape of a filament, and wherein a ratio of a length of the body and an average diameter of the body is a value between 10 and 10^8.

subjecting the alloy to an aging process using a reducing agent, the aging process microscopically increasing at least one of a cross-sectional area and a surface area of the alloy.

Claim 56 (new): The method as recited in claim 55, further comprising:

washing the material with alcohol after the reductive treatment so as to form an activated slurry;

filtering the activated slurry through a fine filter;

neutralizing the activated slurry in alcohol; and

introducing the neutralized slurry as a liquid filling into the reactor chamber.

Claim 57 (new): The method as recited in claim 55, wherein the alloy contains the elements tin, copper, silver and gold, having a composition of 90-98% tin, 2-5% copper, 0.05-2% silver, and 0.01-0.2% gold, and further comprising casting the alloy in a mold and machining the alloy into a continuous chip in such a manner that the obtained chip material is deformable.

Claim 58 (new): The method as recited in claim 57, wherein the chip material has a band thickness of 0.1-0.5 mm.

Claim 59 (new): The method as recited in claim 55, wherein the body is formed as a deformable wire, and further comprising one of braiding, weaving and twisting the wire so as to increase a surface area of the alloy.

Claim 60 (new): The method as recited in claim 55, wherein the body is formed of a sheet metal and further comprising one of rolling punching and stamping the sheet metal so as to increase a surface area of the alloy.

Claim 61 (new): The method as recited in claim 55, wherein the support material that has a large surface and includes at least one of an inactive metal, plastic, and ceramic, and wherein the coating of the support material is performed by at least one of electrolytic deposition, vapor-deposition, spraying, and dipping.

Claim 62 (new): The method as recited in claim 61, wherein the coating is performed by dipping in one of a cold state with bonding agents, and a liquid molten state.

Claim 63 (new): The method as recited in claim 55, further comprising forming the body into one of a cylindrical, spherical, hemispherical, and tubular shape according to a shape of a housing, and inserting the body into a fuel-carrying component.

Claim 64 (new): The method as recited in claim 63, wherein the fuel-carrying component includes at least one of a tank, a hose and a filter.

Claim 65 (new): The method as recited in claim 55, further comprising providing a filter made of wire screen and fabric on an side after the coating.

Claim 66 (new): The method as recited in claim 55, further comprising activating the alloy by alternate dipping in sodium hydroxide solution, alcohol, and wax and inserting the body into a housing.

Claim 67 (new): The method as recited in claim 55, further comprising increasing a specific surface area per unit area of the body by blasting the body with a blasting material.

Claim 68 (new): The method as recited in claim 65, wherein the blasting material includes at least one of aluminum oxide and a reducing agent.

Claim 69 (new): A method for producing a liquid fuel additive comprising:

providing a support material;

coating the support material with an alloy so as to form a body, the alloy containing at least 80% tin and constituting an active material that reacts with the fuel, wherein the body is formed as one of a band, a chip, a spiral and a wire in a shape of a filament, and wherein a ratio of a length of the body and an average diameter of the body is a value between 10 and 10^8.

subjecting the alloy to an aging process using a reducing agent, the aging process microscopically increasing at least one of a cross-sectional area and a surface area of the alloy.

washing the material with alcohol after the reductive treatment so as to form an activated slurry;

filtering the activated slurry through a fine filter;

washing the activated slurry in alcohol; and

introducing the slurry and the alcohol as an additive for fuel.